



2018 Annex Amendments

TOPICS	AFFECTED		APPLICABILITY
	ANNEX	Other	
<u>Introduction of remote pilot licence and the provision for the regulation of RPAS licensing to support international flights operating under IFR</u>	1		3 Nov 2022 *
<u>Amendment as a result of proposed amendments to Annex 1 relating to RPAS</u>	2		8 Nov 2018 (2022 *)
<u>Consequential amendment concerning change of references related to the provision of aeronautical information service</u>	3		8 Nov 2018
<u>Introduction of space weather advisory information services; improvement of the provision of SIGMET information by meteorological watch offices (MWOS); information on the release of radioactive material into the atmosphere; SIGMET and AIRMET information; modifications of IWXXM representations of information; and aeronautical meteorological personnel qualification and competency, education and training</u>	3		8 Nov 2018 (2019 *) (2020 *)

* Related topics contain embedded applicability dates



TOPICS	AFFECTED		APPLICABILITY
	ANNEX	Other	
<u>Consequential amendment to address the revised definition and description of "Procedure altitude/height"</u>	4		8 Nov 2018
<u>Airborne image recordings, flight data recorder parameter lists and the simplification of flight recorder SARPs</u>	6 (I, II, III)		1 Jan 2023*
<u>Amendment as a result of the restructuring of PANS-OPS, Vol I</u>	2, 6 (I, II, III)		8 Nov 2018
<u>Approval and global recognition of AMOs (Phase I and II) and provisions linked to EAMR framework</u>	1, 6 (I, II, III), 8		5 Nov 2020*
<u>Guidance on RFFS and helicopter refueling</u>	6 (I and III)		8 Nov 2018
<u>Harmonization and alignment of fatigue management SARPs</u>	6 (I and III)		8 Nov 2018
<u>Security of flight crew compartment</u>	6 (I)		8 Nov 2018

* Related topics contain embedded applicability dates



2018 Annex Amendments

TOPICS	AFFECTED		APPLICABILITY
	ANNEX	Other	
<u>Halon replacement in civil aircraft cargo compartment fire suppression systems</u>	8		28 Nov 2024*
<u>Continuing airworthiness SARPs concerning: Suspension and revocation of Type Certificate; Security Sensitive Airworthiness Directives; transfer and suspension and revocation of a type certificate; and Eligibility, issuance and continued validity of a Certificate of Airworthiness</u>	8		8 Nov 2018
<u>Design Standards for light aircraft under 750 kg; applicability of Annex 8, Part IIIB to single-engine aeroplanes over 5 700 kg; stall warning Standards; and Standards for the applicability of weight limitations for all aircraft for cargo compartment protection.</u>	8		[D] + 3 Years (28 Nov 2021*)
<u>Global navigation satellite system (GNSS) and instrument landing system (ILS)</u>	10 (I)		8 Nov 2018
<u>Ground-based augmentation system (GBAS), satellite-based augmentation system (SBAS) and the strategy for introduction and application of non-visual aids to approach landing</u>	10 (I)		8 Nov 2018
<u>Radiotelephony procedures</u>	10 (II)		8 Nov 2018

* Related topics contain embedded applicability dates



TOPICS	AFFECTED		APPLICABILITY
	ANNEX	Other	
<u>Surveillance and airborne collision avoidance systems (ACAS)</u>	10 (IV)		8 Nov 2018
<u>Access to evidential material during investigation and monitoring the progress of safety recommendations</u>	13		8 Nov 2018
<u>Modifications of aerodrome design specifications in Chapters 3 and 4</u>	14 (I)		8 Nov 2018
<u>Restructure of Annex 15 to facilitate incorporation of AIM requirements and changes to the technical content of Annex 15 to facilitate the transition from AIS to AIM environments</u>	15	4, 6 (I), 10 (I, II), 11, 14 (I, II)	8 Nov 2018 (2020*)
<u>Space weather information</u>	15		8 Nov 2018

* Related topics contain embedded applicability dates



Access to evidential material during investigations

- **Improvements:**

- Increased efficiency and effectiveness of investigations.

- **Expected Benefits:**

- Unrestricted and timely access by investigation authorities to the accident site, examination of the wreckage, and data from flight recorders.

- **Affected Documents**

- Annex 13 (Amendment 16)
- Manual on Accident and Incident Investigation Policies and Procedures (Doc 9962)

Timelines

- **8 November 2018**
Applicability of amendment(s)



Monitoring the progress of safety recommendations

- **Improvements:**

- strengthening of procedures to monitor responses to safety recommendations stemming from investigations and safety studies.

- **Expected Benefits:**

- enhancement of collection, analysis and sharing of safety risks.

- **Affected Documents**

- Annex 13 (Amendment 16)
- Manual of Aircraft Accident and Incident Investigation, Part IV – Reporting (Doc 9756)

Timelines

- **8 November 2018**
Applicability of amendment(s)



Airborne image recordings and flight data recorder parameter lists

- **Improvements:**

- Flight crew-machine interface (image) data and additional flight data recorder parameters available for investigations.

- **Expected Benefits:**

- Enhanced understanding of how flight crew interface with the aircraft resulting in effective and efficient investigations.

- **Affected Documents**

- Annex 6, Part I (Amendment 43)
- Annex 6, Part II (Amendment 36)
- Annex 6, Part III (Amendment 22)

Timelines

- **1 January 2023***
Applicability of amendment(s)



Simplification of flight recorder SARPs

- **Improvements:**
 - Better understanding and interpretation of flight recorder related provisions.
- **Expected Benefits:**
 - Facilitate the implementation of these provisions.
- **Affected Documents**
 - Annex 6, Part I (Amendment 43)
 - Annex 6, Part II (Amendment 36)
 - Annex 6, Part III (Amendment 22)

Timelines

- **1 January 2018**
Applicability of amendment(s)



Radiotelephony procedures

- **Improvements:**
 - Add clarity in the transmission of numbers by avoiding repetitions of zeros
- **Expected Benefits:**
 - Enhanced safety through improved transmissions.
- **Affected Documents**
 - Annex 10, Vol. II (Amendment 91)

Timelines

- **8 November 2018**
Applicability of amendment(s)



Surveillance and airborne collision avoidance systems (ACAS)

- **Improvements:**

- Enhances provisions in light of system modifications and operational experience;
- Introduces emerging technologies, such as extended hybrid surveillance functionality for ACAS

- **Expected Benefits:**

- Ensure compatibility of surveillance systems and ACAS
- Reduction of radio frequency pollution to ensure better performance of those systems
- Interoperability of civil and military SSR systems in order to avoid safety impacts on those operations.

- **Affected Documents**

- Annex 10, Vol. IV (Amendment 90)
- Doc 9863, Doc 9871, Doc 9924 and Doc 9994

Timelines

- **8 November 2018**
Applicability of amendment(s)



Global navigation satellite system (GNSS) and instrument landing system (ILS)

- **Improvements:**

- Introduction of GNSS performance monitoring and
- complete revision of the guidance material on ILS critical and sensitive areas

- **Expected Benefits:**

- enable States to take informed decisions with regard to approval of the use of new GNSS elements in their airspace
- enhance the protection of ILS signals from blockage and interference caused by fixed objects or vehicles located within the ILS coverage volume

- **Affected Documents**

- Annex 10, Vol I (Amendment 91)

Timelines

- **8 November 2018**
Applicability of amendment(s)



Ground-based augmentation system (GBAS), satellite-based augmentation system (SBAS) and the strategy for introduction and application of non-visual aids to approach and landing

- **Improvements:**

- Enhanced GBAS performance
- Clarification of SBAS provisions and extension of the range of Pseudo Random Noise codes allocated to SBAS
- Update strategy for non-visual aids to approach and landing

- **Expected Benefits:**

- Enable GBAS to support Cat II/III operations
- Confirm SBAS integrity requirements and enable wider implementation of SBAS
- Provide strategic guidance on introduction of GNSS

- **Affected Documents**

- Annex 10, Vol I (Amendment 91)

Timelines

- **8 November 2018**
Applicability of amendment(s)



Modifications of aerodrome design specifications in Chapters 3 and 4

- **Improvements and Expected Benefits:**

- Updated aerodrome design and guidance to optimize aircraft movements
 - Modified provisions for runway/taxiway/shoulder/strip widths and separation distances based on demonstrable and scientifically verified information to enhance aerodrome capacity and efficiency for newer generation of aircraft
 - Improved provisions enable aerodromes to operate recent aeroplane types with increased capacity, capability and connectivity. Envisaged 80% of aerodromes operating Codes D, E and F aeroplanes in 140 States would benefit

- **Affected Documents**

- Annex 14 Vol I (Amendment 14)
- Doc 9981 PANS-Aerodromes;
Doc 9157 Aerodrome Design Manual Parts 1 and 2

Timelines

- **8 November 2018**
Applicability of amendment(s)



Annex 3 Amendments

Introduction of space weather advisory information services; improvement of the provision of SIGMET information by meteorological watch offices (MWOS); information on the release of radioactive material into the atmosphere; SIGMET and AIRMET information; modifications of IWXXM representations of information; and aeronautical meteorological personnel qualification and competency, education and training

- **Improvements:**

- Introduction of a new space weather information service as requested by Users and improved provision of meteorological (MET) information by 8 November 2018 for Amendment 78 to Annex 3, except for the provisions listed below:
 - 2019 for the provisions concerning the modifications of IWXXM representations and information on the release of radioactive material into the atmosphere;
 - 2020 for the provision concerning the IWXXM as a Standard.

- **Expected Benefits:**

- Significant efficiencies expected through the operational use of new information.
- Improved harmonization of the provision of en-route MET information.
- Improved clarity in the provision of information about tropical cyclones.
- Removal of ambiguity between operational messages and communications exercise messages.

- **Affected Documents**

- Annex 3 (Amendment 78); Annex 15 (Amendment 40)
- PANS-ABC, PANS-ATM

Timelines

- **8 November 2018**
Applicability of amendment(s)



Modifications of IWXXM representations of information

- **Improvements:**

- Extend the use of the *ICAO Meteorological Information Exchange Model (IWXXM)* to facilitate the exchange of meteorological observations and reports (METAR/SPECI), aerodrome forecasts (TAF), SIGMETs, AIRMETs, and volcanic ash and tropical cyclone advisory information, in a system-wide information management (SWIM)-compliant environment.

- **Expected Benefits:**

- Significant efficiencies would be expected through the integration of meteorological information to the system-wide information management (SWIM) environment.
- IWXXM transition staged, allowance for some States to defer full implementation.

- **Affected Documents**

- Annex 3 (Amendment 78)

Timelines

- **8 November 2018**
Applicability of amendment(s)



Space weather information

- **Improvements:**

- Provision of a new service concerning space weather advisory information.
- New *Manual on Space Weather Information in Support of Air Navigation*, Doc 10100.

- **Expected Benefits:**

- Response to Users needs expressed by IATA by providing information to assist operators in assessing the risks associated with space weather events.
- Efficiency enhancements will reduce industry costs

- **Affected Documents**

- Annex 3 (Amendment 78); Annex 15 (Amendment 40)
- PANS-ABC, PANS-ATM

Timelines

- **8 November 2018**
Applicability of amendment(s)



Guidance on RFFS for Operators

- **Improvements:**

- Improved guidance for Operators on the selection of aerodromes for inclusion in the operational flight plan. Provides flexibility for considering RFFS protection levels as one element of a risk assessment as part of operator SMS

- **Expected Benefits:**

- Safer and more flexible operation due to selection of the most suitable aerodromes, taking into consideration all relevant factors.

- **Affected Documents**

- Annex 6, Part I (Amendment 43)

Timelines

- **8 November 2018**
Applicability of amendment(s)



Helicopter refueling

- **Improvements:**

- Upgrades refueling provisions to Standard from recommendation
- Permits refueling with passengers on board or rotors turning, with mandated and recommended safety measures based on industry best practice.

- **Expected Benefits:**

- Increased safety and efficiency of helicopter operations by mandating safety procedures. Reduction of exposure to hazardous conditions for transiting passengers.

- **Affected Documents**

- Annex 6, Part III (Amendment 22)

Timelines

- **8 November 2018**
Applicability of amendment(s)



Amendment as a result of the restructuring of PANS-OPS, Vol I

- **Improvements:**
 - Corrected reference due to restructuring of PANS OPS Vol
- **Expected Benefits:**
 - Consistency of ICAO documentation
- **Affected Documents**
 - Annex 2 (Amendment 46)
 - Annex 6, Part I (Amendment 43)
 - Annex 6, Part II (Amendment 36)
 - Annex 6, Part III (Amendment 22)

Timelines

- **8 November 2018**
Applicability of amendment(s)



Approval and global recognition of AMOs and EAMR

- **Improvements:**

- implementation will support the option for the State of Registry to recognize an AMO approval issued by another Contracting State.
- Implementation will allow flexibility for the use of digital and other paperless forms of maintenance records for States.

- **Expected Benefits:**

- Reduces cost and facilitate the promotion of the mutual recognition of AMOs.
- facilitate interoperability of aircraft

- **Affected Documents**

- Annex 1 (Amendment 175); Annex 6, Part I (Amendment 43), Annex 6, Part II (Amendment 36), Annex 6, Part III (Amendment 22); Annex 8 (Amendment 106)

Timelines

- **5 November 2020 ***
Applicability of amendment(s)



Continuing airworthiness SARPs

- **Improvements:**

- Clear SARPs concerning: Suspension and revocation of Type Certificate; Security Sensitive Airworthiness Directives; transfer and suspension and revocation of a type certificate; and Eligibility, issuance and continued validity of a Certificate of Airworthiness.

- **Expected Benefits:**

- clarifies the continuing airworthiness responsibilities of a State of Design and the States of Registry regarding the issuance of a certificate of airworthiness.

- **Affected Documents**

- Annex 8 (Amendment 106)

Timelines

- **5 Nov 2018**
Applicability of amendment(s)



Design Standards

- **Improvements:**

- Clear SARPs concerning: Design Standards for light aircraft under 750 kg, applicability of Annex 8, Part IIIB to single-engine aeroplanes over 5700 kg, stall warning and applicability of weight limitations for all aircraft for cargo compartment protection

- **Expected Benefits:**

- The amendment offers an opportunity for efficient management of resources.
- Benefits States that want to facilitate the international commercial operation of light sport aircraft weighing less than 750kg..

- **Affected Documents**

- Annex 8 (Amendment 106)

Timelines

- **28 Nov 2021***
Applicability of amendment(s)



Halon replacement

- **Improvements:**

- Clear Standards for Halon replacement in civil aircraft cargo compartment fire suppression systems;

- **Expected Benefits:**

- The implementation of these SARPs will ensure that there is a reduction in the use of ozone-depleting substances and will have a positive environmental impact

- **Affected Documents**

- Annex 8 (Amendment 106)

Timelines

- **28 Nov 2024***
Applicability of amendment(s)



Harmonization and alignment of fatigue management SARPs

- **Improvements:**

- Enables FRMS regulations for international commercial helicopter operations

- **Expected Benefits:**

- Offers an opportunity for increased operational flexibility under FRMS while maintaining or improving safety margins
- Enhances understanding of operator responsibilities for fatigue management when complying with prescribed flight and duty limitations.

- **Affected Documents**

- Annex 6, Part I (Amendment 43); Annex 6, Part III (Amendment 22)

Timelines

- **8 November 2018**
Applicability of amendment(s)



Security of flight crew compartment

- **Improvements:**

- Increased threshold for the provision requiring a locked crew compartment door, in line with increasing MCTOM of aircraft used for business aviation

- **Expected Benefits:**

- Increased MCTOM threshold correctly distinguishes between types of operation as per the original intent of the provision.

- **Affected Documents**

- Annex 6, Part I (Amendment 43)

Timelines

- **8 November 2018**
Applicability of amendment(s)



Review and restructure of Annex 15

- **Improvements:**

- Restructure of Annex 15 to facilitate the incorporation of Aeronautical Information management (AIM) requirements
- Review of the technical content of Annex 15 to enable the transition to quality-assured and digital data-centric environments
- Improvement of the SNOWTAM format (with an applicability date of **5 Nov 2020**)

- **Expected Benefits:**

- Harmonized approach to transition to AIM environments, through a global set of provisions and an enhanced terminology defining the AIM scope, functions and associated products and services.
- Enhanced understanding of roles and responsibilities along the aeronautical data process
- Better means are provided to States to increase quality at origination and to maximize data integrity along the aeronautical data process
- Significant efficiencies expected in the process through the use of new digital aeronautical information products (“digital data sets”)

- **Affected Documents**

- Annex 15 (Amendment 40)
- **Consequential:** Annex 3 (Amd. 78), Annex 4 (Amd. 60), Annex 6, Part I (Amd. 43), Annex 10, Vol I (Amd X), Annex 10, Vol II (Amd. 91), Annex 11 (Amd. 51), Annex 14, Vol I (Amd X), Annex 14, Vol II (Amd 8)

Timelines

- **8 November 2018**
Applicability of amendment(s)



Consequential amendment to address the revised definition and description of "Procedure altitude/height"

- **Improvements:**

- The definition of procedure altitude/height is expanded outside the intermediate and final approach segment scope to account elements such as air traffic service requirements, airspace structure, environmental considerations

- **Expected Benefits:**

- More consistent use of terminology concerning altitudes in instrument procedure design and across the ICAO documents
- More standardized repeatable vertical profile in all phases of flight and therefore enhanced efficiency of flight

- **Affected Documents**

- Annex 4 (Amendment 60)

Timelines

- **8 November 2018**
Applicability of amendment(s)



Consequential amendment concerning change of references related to the provision of aeronautical information service

- **Improvements:**
 - Change of references
- **Expected Benefits:**
 - Alignment of ICAO provisions
- **Affected Documents**
 - Annex 3 (Amendment 78)

Timelines

- **8 November 2018**
Applicability of amendment(s)



Introduction of remote pilot licence and the provision for the regulation of RPAS licensing to support international flights operating under IFR

- **Improvements:**

- Creation of a regulatory structure for the issuance of remote pilot licence within the scope of international Instrument flight rules (IFR) operations

- **Expected Benefits:**

- Guidance for States in order to implement their own regulations for licensing necessary to allow future operations
- Standardized approach for RPAS licensing

- **Affected Documents**

- Annex 1 (Amendment 175)

Timelines

- **3 November 2022 ***
Applicability of amendment(s)



Amendment as a result of proposed amendments to Annex 1 relating to RPAS

- **Improvements:**

- Consequential update of Annex 2 appendix 4 is necessary to address the introduction of a regulatory framework for remote pilots within the scope of international instrument flight rules (IFR) operations

- **Expected Benefits:**

- Consistency in ICAO regulatory framework

- **Affected Documents**

- Annex 2 (Amendment 46)

Timelines

- **8 November 2018**
Applicability of amendment(s)
 - Embedded standards for **3 November 2022***